

AMENDMENTS

In the Claims:

Please cancel claim 33 without prejudice, and amend claims 2, 3, 5 and 34 as follows:

2. (Amended) The method of claim 5, wherein said tissue specific is conjugated to said ethylenedicysteine on both acid arms of the ethylenedicysteine.
3. (Amended) The method of claim 5, wherein said radionuclide is ^{99m}Tc , ^{188}Re , ^{186}Re , ^{183}Sm , ^{166}Ho , ^{90}Y , ^{89}Sr , ^{67}Ga , ^{68}Ga , ^{111}In , ^{183}Gd , ^{59}Fe , ^{225}Ac , ^{212}Bi , ^{211}At , ^{64}Cu or ^{62}Cu .
5. (Amended) A method of synthesizing a radiolabeled ethylenedicysteine derivative for imaging comprising the steps:
 - a) obtaining a tissue specific ligand;
 - b) admixing said ligand with ethylenedicysteine (EC) to obtain an EC-tissue specific ligand derivative; and
 - c) admixing said EC-tissue specific ligand derivative with a radionuclide and a reducing agent to obtain a radionuclide labeled EC-tissue specific ligand derivative, wherein the EC forms an N_2S_2 chelate with the radionuclide;wherein said tissue specific ligand is an anticancer agent, DNA topoisomerase inhibitor, antimetabolite, tumor marker, folate receptor targeting ligand, tumor apoptotic cell targeting ligand, tumor hypoxia targeting ligand, DNA intercalator, receptor marker, peptide, nucleotide, organ specific ligand, antibiotic, antifungal, antibody, glutamate pentapeptide or an agent that mimics glucose.